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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/964,649	09/28/2001	Seiji Okura	1086.1150	1981

21171 7590 06/17/2005
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EXAMINER

KERN, MATTHEW C

ART UNIT PAPER NUMBER

2654

DATE MAILED: 06/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/964,649

Applicant(s)

OKURA ET AL.

Examiner

Kern Matthew

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The examiner suggests that the title highlight the novelty of the invention in some capacity.

Claim Objections

2. Claims 2-5, 7, 12, 14-15, 17, 20-23, 27, and 29-30 are objected to because of the following informalities: each limitation in the claim is not discretely separated from another limitation, using semicolons and line spaces. The examiner suggests the applicant start a new line for each limitation for easier reading of the claims.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 21-30 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. These claims recite software per se. A computer-readable medium providing functionality for processing physical data, however, is statutory.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

6. Claim 1,5-6,8,11,15-16,18, 21,25-26,28 and 31 are rejected under 35 U.S.C. 102(a) as being anticipated by Hajic et al (Machine translation of very close languages).

As per claims 1,11; 21 and 31, Hajic et al. teach a translation support comprising:

- translating a document in a certain language into a document in another language by a machine translating apparatus (MT system, p9 ,col 1, line 44);
- translating a document in a certain language into a document in another language by a translation memory device by searching an original/translation database in which original/translation information has been accumulated (system tries to match the source with sentence already stored in the translation memory, pg 9, col 2, lines 10-14); and,
- making the original/translation information translated by said machine translating apparatus and the original/translation information translated by said translation memory device common so that data is compatible and mutually fetching those information as original/translation information (the system tries to match the source with sentences

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already stored in the translation memory, pg 9, col 2, lines 12-14, implies an API that make sentences from MT system and translation database compatible).

Finally, Hajic et al implement the method on an apparatus that runs code (TRADOS, pg 9, col 1, line 2, runs on a computer and is implemented as software instructions run by the computer, where the software package is inherently stored on a computer readable medium).

As per claims 5,15,and 25, Hajic et al. teach where:

- the search input sentence of said translation memory device is further sent to said machine translating apparatus via a data compatible processing unit (MT system, and translation memory, pg 9, col 1, line 44-col2, line 4, indicates an API between the MT and Translation memory, and that the translation does the macro translation first, and then the MT system fills in the rest—the micro part).
- an analysis result is obtained (morphological analysis of Czech, p10, col 2, line 9);
- original/translation sentence having similar structures are searched from said analyzed original/translation sentence database by using said analysis result as a search key (morphological synthesis of Slovak, pg 10, col 2, line 14); and,
- they are displayed (MT system , pg 9, line 44, implies displaying translation to the user so that he can evaluate it).

Finally, Hajic et al implement the method on an apparatus that runs code (TRADOS, pg 9, col 1, line 2, runs on a computer and is thus implemented as software instructions run by the computer).

As per claims 6, 16, and 26 Hajic et al. teach where examples of the actual use of a designated word are searched and displayed (manually tagged corpus of Czech text—mainly general newspaper domain, pg 11, col 2, lines 24-25).

Finally, Hajic et al implement the method on an apparatus that runs code (TRADOS, pg 9, col 1, line 2, runs on a computer and so is implemented as software instructions run by the computer).

As per claims 8, 18, and 28, Hajic et al. teach where an abstract showing an outline of the translation target document is further displayed before translation (target text created by a human translator is then compared with the text created by the mechanical application of translation memory to source text, pg 12, col 1, lines 21-25).

Finally, Hajic et al implement the method on an apparatus that runs code (TRADOS, pg 9, col 1, line 2, runs on a computer and so is implemented as software instructions run by the computer).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2, 12, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hajic et al. as applied to claims 1, 11, and 21 above, respectively, and further in view of Kimito et al. (JP 09-026961).

Hajic et al. teach where said original/translation database has:

- an original/translation sentence database which is used by said translation memory device (contains pairs of previously translated sentences, pg 9, col 2, lines 8-10, implies a database used by the translation memory);
- an analyzed original/translation sentence database in which the original/translation sentences have been analyzed by a morpheme analysis, a syntax analysis, or the like (morphological analysis, pg 10, col 2, lines 9, and MT system, pg 9, col 1, line 44, in which an artisan will recall that many MT systems have databases containing sentences that have been morphologically analyzed and the results recorded);
- and a dictionary in which original /translation words and original/translation patterns which are used by said machine translating apparatus have been registered (general bilingual dictionary, pg 10, col 2, lines 14).
- said original/translation sentences obtained by said machine translating apparatus or sentences obtained by correcting the original/ translation sentences

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obtained by said translation memory device are converted into compatible data and added into said original/translation sentence database (MT/TM system, pg 9, col 1, line 44-col 2 lines 1-4, imply an API that allow the two to interact and exchange data);

- analyzed original/translation sentences obtained by analyzing the original/translation sentences are added into said analyzed original/translation sentence database (MT system, pg 9, col 1, line 44, where an artisan will recognize as many MT systems perform morphological analysis on a sentence and storing these analyzed sentences in a database); and
- further, the original/translation words or original/translation patterns are extracted from said analyzed original/translation sentences and added into a dictionary of said machine translating apparatus (MT system, pg 9, col 1, line 44, where an artisan will recognize that many MT systems have dictionaries in which words/patterns from analyzed sentences are added to a database for future use).

Hajic et al. do not teach registering the content of the dictionary by a user. Kimito et al., however, teaches this (registered in the translation memory, Abstract). Therefore, it would have been obvious to one having skill in the art at the time of invention to have Hajic et al's system allow for user registration of words as taught by Toke so that the user can add and subtract words to the dictionary as she sees fit.

Futher, Hajic et al. do not teach where the original/translation sentences obtained by said translation memory device or original/translation sentences translated by the user are added into said original/translation sentence database. However, the examiner takes Official Notice that an artisan would recognize the value of having a user-

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translated sentence be saved in a database so that if the same sentence is encountered in the future, it does not have to be analyzed again. Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to have the user be able to save their translation so that time can be saved.

Finally, Hajic et al implement the method on an apparatus that runs code (TRADOS, pg 9, col 1, line 2, runs on a computer and is implemented as software instructions run by the computer).

8. Claims 3,13,and 23, and 7,17,and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hajic et al. and Kimito et al. as applied to claims 1,11, and 21 or 2,12, and 22 above, respectively, and further in view of Bernth (US patent 6,285,978).

As per claims 3,13, and 23, neither Hajic et al. nor Kimito et al. teach where confidence degrees are further added to original/translation word candidates or original/translation pattern candidates which were automatically extracted from said analyzed original/translation sentences and said candidates with the confidence degrees are displayed. Bernth, however, teaches adding confidence measures to a translation (col 3, lines 53-55). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to add confidence degrees to the translation so that the user has an idea of the "success" of the translation.

Finally, Hajic et al. implement the method on an apparatus that runs code (TRADOS, pg 9, col 1, line 2, runs on a computer and is implemented as software instructions run by the computer).

As per claims Claims 7, 17, and 27, Hajic et al. teach:

- where a sentence is simultaneously translated by said translation memory device (TRADOS, pg 9, col 2, lines 1-2); and,

Hajic et al. do not teach where said machine translating apparatus, with respect to an output display of translation candidates added with marks indicative of confidence degrees from said translation memory device, marks indicative of confidence degrees are further added to the translated sentence candidates outputted from said machine translating apparatus and said candidates with the marks are displayed. Bernth et al., however, teach confidence markings of the translation (col 3, lines 53-54). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to have Hajic et al's translation from the TM and the MT systems have confidence indications as taught by Bernth et al. so that the user can check the "success" of the progressing translation and stop the translation if the it is not going well so that time is not wasted.

Finally, Hajic et al implement the method on an apparatus that runs code (TRADOS, pg 9, col 1, line 2, runs on a computer and is implemented as software instructions run by the computer).

9. Claims 4, 14, and 24 and 10, 20, and 30 are both rejected under 35 U.S.C. 103(a) as being unpatentable over Hajic et al. as applied to claims 1, 11, and 21 above.

As per claims 4, 14 and 24, Hajic et al. teach where there is further executed a similar sentence translation such that when said translation memory device is requested to translate,

- an analysis result is obtained (morphological analysis of Czech, pg 10, col 2, line 9),
- different input words are sent to said machine translating apparatus (general bilingual dictionary, pg 9, col 2, line 13),
- the original /translation words are obtained (general bilingual dictionary, pg 10, col 2, lines 13), and
- the different words of original /translation similar sentence are replaced with the obtained original/translation words (Morphological synthesis of Slovak, pg 10, col 2, lines 15-16).

Finally, Hajic et al implement the method on an apparatus that runs code (Trados, pg 9, col 1, line 2, runs on a computer and is implemented as software instructions run by the computer).

Hajic et al. do not teach where similar sentences are searched by searching said original/translation database on the basis of an input sentence. However, the examiner takes Official Notice that this is often the first step performed in MT/TM systems.

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Therefore, it would have been obvious for one of ordinary skill at the time of invention to have search the TM based on the input sentence because the chance may exist that the TM already has the translated version of the form, in which case the MT does not have to perform all its steps, which costs time.

Further, Hajic et al. do not teach where the input sentence is sent to said machine translating apparatus. However, the examiner takes Official Notice that an artisan would know to send the sentence received by the TM to the MT so that the latter could "polish" the sentence to make it more natural sounding. Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to send the obtained sentence from the TM to the MT system so that a better sounding sentence could be obtained.

Finally, Hajic et al. do not teach where a search result of said original/translation database is compared with an analysis result obtained from said machine translating apparatus. However, the examiner takes Official Notice that it is old and well-known in the art to match a sentence in one language with a sentence in another based on their corresponding syntax structures. Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to compare the two sentences based on syntax structure so that the MT can save time when finding an appropriate target equivalent sentence.

As per claims 10, 20, and 30, Hajic et al. teach:

- an editing instruction is issued from a translation editing unit (human translator decides whether to use it, to modify it, or reject it, pg 9, col 2, lines 14-16, which implies that the user is presented these options/ instructions on a screen).

Hajic et al. do not teach where a translation target sentence is displayed on an original sentence display unit. However the examiner takes Official Notice that it is old and well-known the art for MT systems to display the translated sentence to the user. Therefore, it would have been obvious for one of ordinary skill at the time of invention to display the resulting translated sentence to the user so that she can determine how good of job the translator did in translating the document.

Further, Hajic et al do not teach where the translated sentence is displayed on a system output unit. However, the examiner take Official Notice the at it is old and well known for MT systems to run over a network, such as the internet. Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to have the translated sentence displayed on a system output because a proprietary translator may be running remotely off-site, and the only way the person can use the computer is through a networked/system computer.

Finally, Hajic et al implement the method on an apparatus that runs code (TRADOS, pg 9, col 1, line 2, runs on a computer and is implemented as software instructions run by the computer).

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10. Claims 9, 19, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hajic et al. as applied to claims 1, 11, and 21 above, respectively, and further in view of Fumito (JP 09-134358).

Hajic et al. do not teach where the document information including the number of characters, the number of words, and expressions of a translation target document is further calculated and displayed in order of frequencies. Fumito, however, teaches where the document information, including the number of words, is further calculated (number of words in each sentence, solution). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to have Hajic et al. count word frequencies as taught by Fumito so that the most common words are displayed earlier.

Neither Hajic nor Fumito teach calculating the number of characters or expressions of a translation target document. However, an artisan would realize that both the number of characters and of recurring expressions would be valuable to have so that she could determine the "success" of the translation. Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention so that the operator would be able to add repetitive words to a database so that they can be recalled in the future and not be re-translated, thus saving time.

Finally, Hajic and Fumito do not display the aforementioned statistics in order of appearance frequencies. However, the examiner takes Official Notice that one of ordinary skill at the time of invention would want the highest occurring words be displayed first. Therefore, it would have been obvious to one having ordinary skill in the

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art at the time of invention to present to the user the highest word frequency count first so that the user could spend less time on the words that are more infrequent.

Finally, Hajic et al implement the method on an apparatus that runs code (TRADOS, pg 9, col 1, line 2, runs on a computer and so is implemented as software instructions run by the computer).

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure.

Webb et al. (Advantages and disadvantages of translation memory, 1998) teach the translation process with a TM using a flowchart.

Roche et al. (US Patent 6,535,842) teach a sentence database.

Okunishi (US patent 5,873,055) teach machine translation system.

Kutsumi (US patent 5,826,219) teach machine translation.

King et al (US patent 6,278,969) teach an integrated MT/HTM system.

Clark (US patent 6,345,244) teach a translation memory.

Masako (JP 11-325103) teach registering words into a dictionary.

12. Any inquiry concerning this communication should be directed to Mr. Matthew Kern, whose telephone number is (517) 272-7606 or fax number (703) 872-9306. The examiner can normally be reached Mondays-Fridays from 9:30 am to 6 pm.

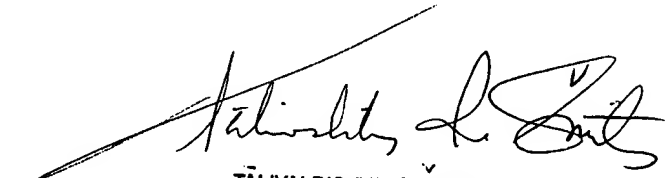
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Talivaldis Smits, can be reached at (517) 272-7628. The facsimile phone number for this Technology Center is (703) 872-9306.

Any inquiry of a general nature of relating to the status of this application should be directed to the Technology Center 2600 receptionist, whose telephone number is (517) 272-2600.

4/11/05

MCK



TĀIVALDIS IVARS ŠMITS
PRIMARY EXAMINER